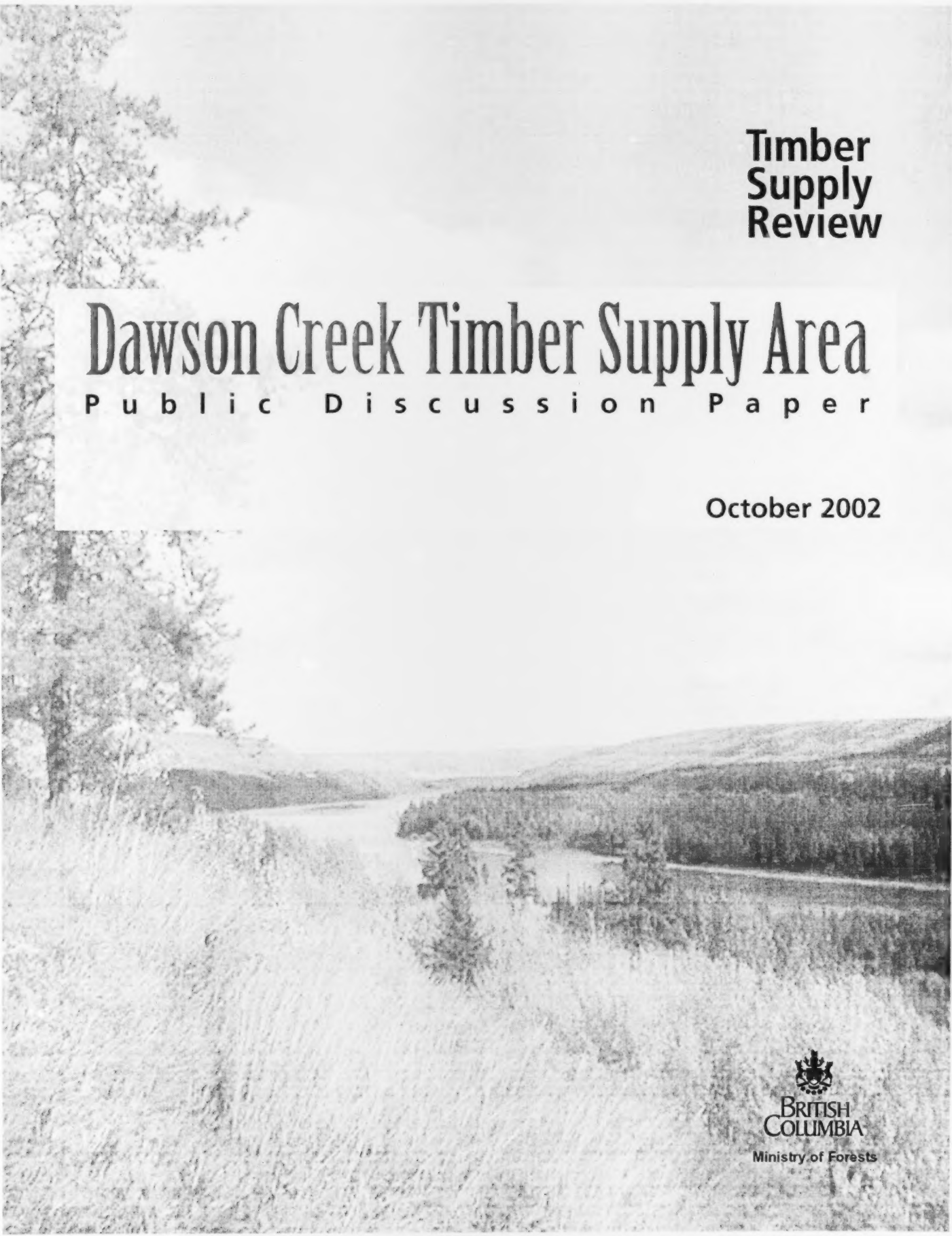




**Timber
Supply
Review**

Dawson Creek Timber Supply Area

P u b l i c D i s c u s s i o n P a p e r

October 2002


**BRITISH
COLUMBIA**
Ministry of Forests

Introduction

Welcome to the timber supply review in the Dawson Creek Timber Supply Area. The British Columbia Forest Service reviews the timber supply^a for all timber supply areas^a (TSAs) and tree farm licences^a (TFLs) in the province about once every five years. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, the chief forester will determine the allowable annual cut (AAC^a) for the Dawson Creek TSA.

The timber supply review considers:

Economic, environmental and social factors, information about current forest management practices, and public input.

The timber supply review produces:

- A new AAC for the next five years
- A list of the information to be improved for future timber supply forecasts

Timber supply review in the Dawson Creek TSA

With the release of the 2002 *Dawson Creek TSA Analysis Report*, the British Columbia Forest Service has completed the second step in its timber supply review (see steps below). The *Analysis Report* contains a timber supply analysis with harvest level forecasts and a socio-economic analysis. This discussion paper summarizes the report, provides an overview of the timber supply review process and encourages British Columbians to provide comments during the 45-day public review period. **Your comments will be accepted until December 9, 2002.**

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester's determination will be outlined in a rationale statement that, along with the summary of public input, will be available to the public upon release. Following the release of the chief forester's AAC determination, the minister of forests will apportion the AAC to the various licences and programs.

* **Timber supply** – the amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.

* **TSA** – an integrated resource management unit established in accordance with Section 7 of the Forest Act.

* **TFL** – provides rights to harvest timber, and outlines responsibilities for forest management, in a particular area.

* **AAC** – the rate of timber harvest permitted each year from a specified area.

Review Process for the Dawson Creek TSA

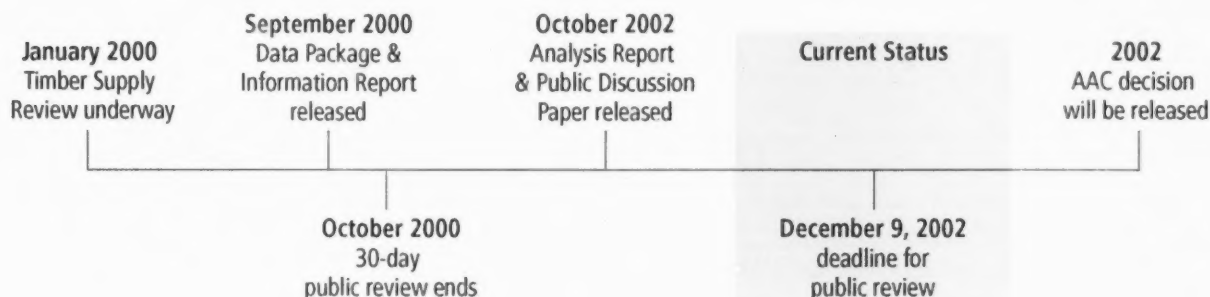


Figure 1. Steps in the timber supply review process for the Dawson Creek TSA.

Description of the TSA

Located in the northeastern interior of British Columbia, the Dawson Creek TSA covers about 2.3 million hectares and is one of six TSAs in the Prince George Forest Region. The TSA is administered from the Dawson Creek Forest District office in Dawson Creek, which also administers Tree Farm Licence 48.

The main population centre is Dawson Creek, where about 40 per cent of the TSA population lives. Other communities include Tumbler Ridge, Chetwynd, Hudson's Hope and Pouce Coupe, as well as two First Nations communities of West Moberly and Sauteau, and a Metis community at Kelly Lake. In 2001, the total population of the TSA was estimated to be 26,449.



First Nations

The Dawson Creek TSA lies completely within the area outlined as Treaty 8 Territory. Both the West Moberly and the Sauteau First Nations are signatories of Treaty 8 and have reserves and traditional territories within the TSA, with a population of more than 900 persons. The Halfway River First Nation and McLeod Lake Indian Band are also signatories of Treaty 8 and have traditional land-use interests within the TSA, but their reserves and traditional territories are outside the TSA. In addition, the Lheidli T'enneh Band (which is not part of Treaty 8) has traditional land-use interests within the TSA, although its reserve is located outside the TSA. A significant number of Metis and other First Nations people reside within the TSA, notably in the Kelly Lake community.

A number of First Nations people are employed with local forest companies, and some bands have direct involvement in the forest industry, through silviculture contracts, small forest licences or joint ventures with non-aboriginal companies. Trapping, hunting and fishing are traditional activities that are important to the economic and social structure of First Nation communities in the area. The Treaty 8 First Nations have expressed concern about the impacts of logging activities on trapping, moose populations and other resource values.

The Dawson Creek TSA contains numerous known sites and areas of cultural significance for First Nations. An archaeological overview assessment, which identifies sites of potential cultural and heritage

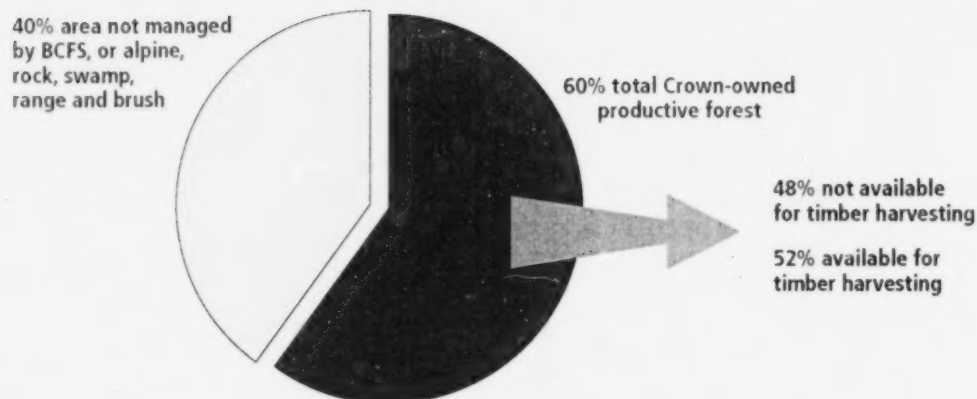


Figure 2. Breakdown of land base for Dawson Creek TSA.

significance, has been developed for the TSA. Information from cultural heritage inventory studies, archaeological impact assessments and traditional-use surveys that have been completed will be considered in the upcoming AAC determination.

The natural resources

The forests of the Dawson Creek TSA provide a wide range of natural resources, including forest products, forage, minerals, recreation and tourism amenities, oil and gas reserves, and fish and wildlife habitats.

The Forest Practices Code outlines a process for identifying species at risk that require special management. Currently, a number of species identified as at risk may be found in the Dawson Creek TSA, including the northern goshawk, Trumpeter swam, fisher, grizzly bear, mountain goat and bull trout.

As Figure 2 shows, about 60 per cent of the Dawson Creek TSA land base is considered productive Crown forest land managed by the British Columbia Forest Service (about 1.4 million

hectares). Currently about 52 per cent (730,220 hectares) of this is considered available for harvesting (31 per cent of the total TSA land base).

Environmental values

Current forest management follows the standards set out by the Forest Practices Code. These standards are designed to maintain a range of biodiversity and wildlife values. In the Dawson Creek TSA, about 48 per cent of the productive Crown-owned forest land is not considered available for timber harvesting and will provide for many environmental values. Forested area both inside and outside the timber harvesting land base will help maintain critical forest habitats for many species. The timber supply analysis includes forest cover requirements for biodiversity, scenic areas, caribou and wildlife habitat, and land base deductions for recreation features, stream, lake and wetland management, and unstable terrain.

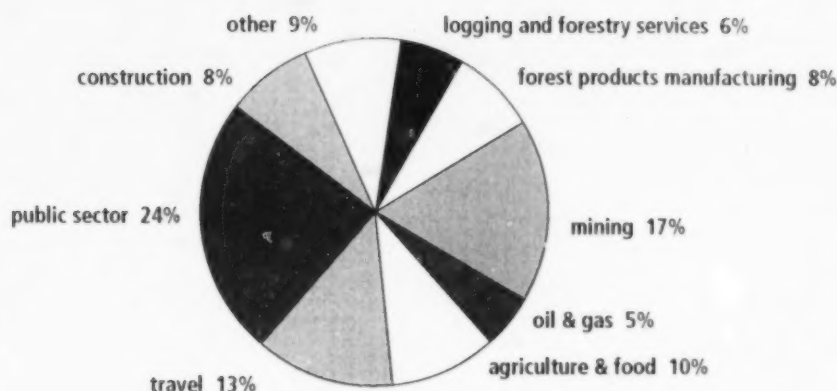


Figure 3. Labour force by sector (1996), Dawson Creek TSA.

Land-use planning

In March 1999, the provincial government approved the Dawson Creek Land and Resource Management Plan (LRMP). The objectives of this strategic land use plan are to guide resource management activities, reduce land and resource use conflicts, and provide economic security for resource development. The plan includes recommendations regarding new protected areas and parks, all of which are now formally designated, with the exception of the Peace River-Boudreau Lake protected area which is expected to be managed as a protected area under the *Environment and Land Use Act*. Currently, no higher level plans have been established for the TSA. Only land-use planning decisions affecting forest practices that have final approval from government have been reflected in the Timber Supply Review.

Current allowable annual cut

Following the last timber supply review, the chief forester set the AAC for the Dawson Creek TSA at 1.733 million cubic metres, effective December 30, 1996. This volume is specified as follows:

- ° 846,533 cubic metres to coniferous-leading stands, of which at least 100,000 cubic metres must be from small lodgepole pine stands; and,
- ° 886,500 cubic metres to deciduous-leading stands.

The AAC is apportioned by the minister of forests to various licences.

Socio-economic profile

Regional economy

The public sector is the leading source of employment for local residents of the Dawson Creek TSA, supporting about 24 per cent of total employment. Next is the forest industry, which is also an important source of employment and income for local residents. This is followed by the business and tourism-related travel and the agriculture sector, as shown in Figure 3. (Labour force data is from 1996 census as

the data from the 2001 census will not be available until 2003.)

The percentage reported for the mining sector in Figure 3 reflects the period throughout the 1980s and 1990s when mining was a significant source of employment. However, the recent closure of the Quintette coal mine and the expected 2003 closure of the Bullmoose coal mine, both in Tumbler Ridge, will significantly reduce mining's contribution to the region's economy.

The Dawson Creek TSA has two large lumber mills, three small lumber mills, a log home mill, a pulp mill and an oriented-strandboard (OSB) plant. In 2001, these mills processed approximately 1.7 million cubic metres of timber. The timber supply for these mills comes from the Dawson Creek TSA, Canfor's TFL 48, and other nearby forest districts, private sources, and Alberta.

From 1999 to 2001, an average of 1,080,425 cubic metres per year was harvested in the Dawson Creek TSA, which is about 62 per cent of the current AAC. The difference is partially due to the U.S. softwood lumber tariffs. Table 1 illustrates the contribution of the forest industry associated with the Dawson Creek TSA timber harvest to both the regional and provincial economies.

Timber supply forecasts

A timber supply computer model was used to project several possible timber supply forecasts for the next 250 years. The base case forecast illustrates the effect of current forest management practices on timber supply, using the best available information. The base case forecast is not a recommendation for an AAC, but rather it is one of many sources of information the chief forester will consider when setting the AAC.

As Figure 4 shows, the base case forecast for the Dawson Creek TSA indicates an initial harvest level of 2,078,000 cubic metres per year is possible. This level is about 20 per cent higher than the current AAC. The base case forecast consists of two components: a deciduous harvest level and a coniferous harvest level that includes 100,000 cubic metres per year from small lodgepole pine stands.

The timber supply analysis indicates that the current deciduous AAC level can be maintained for up to 50 years before declining by 10 per cent per decade to a long-term harvest level of 588,000 cubic metres per year. In addition, the analysis projects a stable harvest level for coniferous stands at about 1,198,000 cubic metres per year,

Forest industry economic contribution

	TSA	Provincial
Direct employment (person years)	605	767
Total employment (person years)	918	1,750
Total employment income (\$1999 millions per year)	38.2	66.5
Provincial government revenues (\$1999 millions per year)	n.a.	32.7

Table 1. Local and provincial economic information associated with the 1999-2001 average annual harvest.

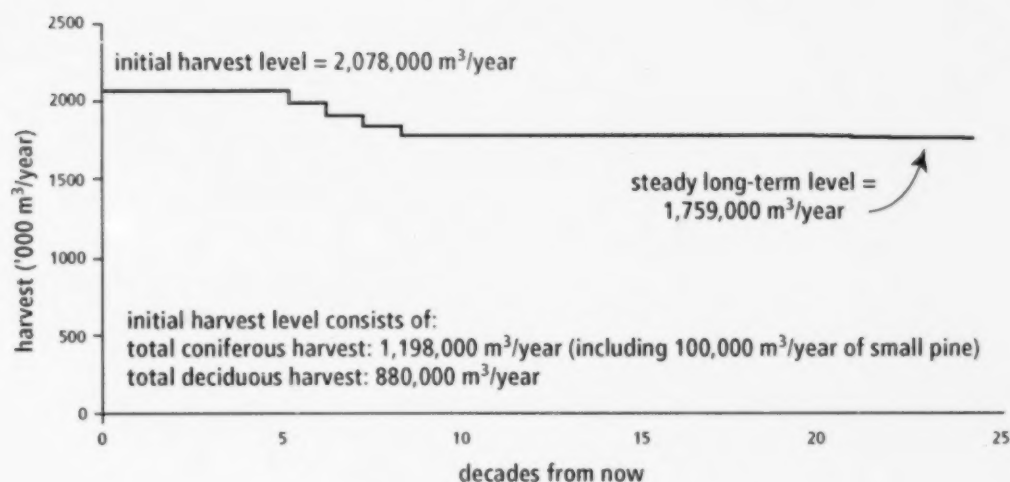


Figure 4. Base case forecast for Dawson Creek TSA, 2002.

which is about 351,000 cubic metres higher than the current coniferous AAC level.

Compared to the 1996 Dawson Creek TSA timber supply analysis addendum, several changes have occurred in the Dawson Creek TSA that affect timber supply forecasts. The size of the timber harvesting land base is about 10 per cent smaller, however due to new forest inventory information, volume projections for both the coniferous- and the deciduous-leading stands are higher than previous estimates.

Sensitivity analyses: examining uncertainty

Because forests are complex and constantly changing, timber supply analysts assess how the timber supply might be affected by uncertainties in inventory information and management practices. These uncertainties are generally examined through what are called sensitivity analyses, which the chief forester will consider in determining an AAC. The sensitivity analyses are useful for assessing how uncertainties and risks, or any

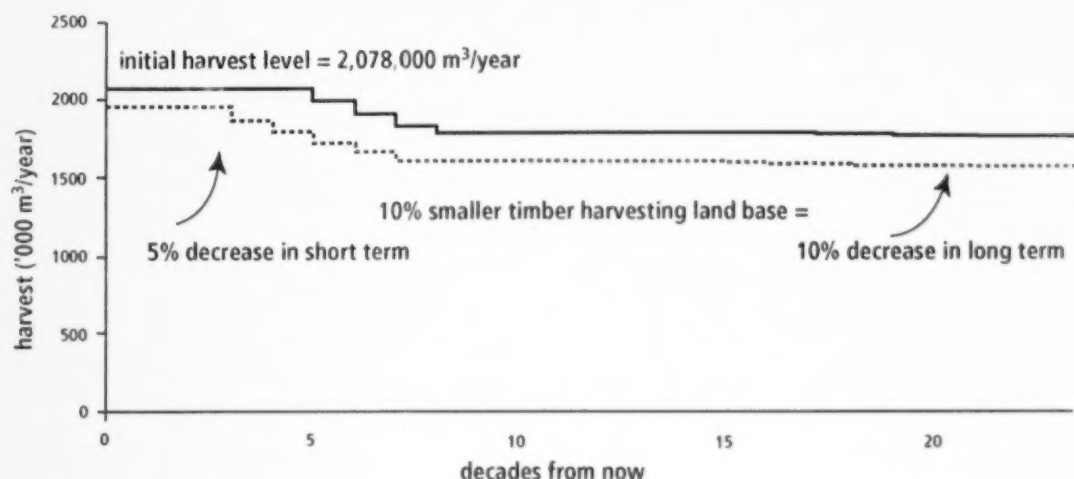
changes in information, might affect timber supply.

In the Dawson Creek TSA, a number of sensitivity analyses were conducted to examine the stability of the timber supply in light of uncertainties. Three key sensitivity analyses are described below. For a complete listing of sensitivity analyses, please refer to the *2002 Dawson Creek TSA Analysis Report*.

Uncertainty about the forest inventory

In 1995, an inventory audit completed in the Dawson Creek TSA reported that timber volumes for existing stands could be underestimated by as much as 19 per cent, on average. Following the completion of this audit, a new inventory procedure, called the vegetation resources inventory (VRI) was initiated in 1997.

In early 2002, a final review of the VRI resulted in the development of height, age and volume adjustments for deciduous, spruce, pine and subalpine fir-leading stands. These adjustments were applied in the timber supply analysis and increased existing stand volumes by about 15 per cent, on average.



The adjustments also affect site productivity estimates, resulting in the addition of about 6,000 hectares to the timber harvesting land base.

The impact of the VRI—volume and area changes—accounts for about 10 per cent of the overall short-term harvest level and about 14 per cent in the long term.

Uncertainty about the size of the timber harvesting land base*

Uncertainty about the size of the timber harvesting land base results from various factors, such as land-use decisions, timber price fluctuations, changes in harvesting and milling technology, and changes in the definition of operability or non-merchantable forest types. As Figure 5 shows, if the timber harvesting land base is decreased by 10 per cent, a harvest level of 1.97 million cubic metres per year could be maintained for three decades.

Uncertainty about the productivity of current old-growth sites after harvesting

The results of two provincial studies suggest that the future productivity of sites currently

occupied by older forests may be underestimated. The research shows that the measured productivity of existing second-growth stands is higher than the productivity estimates using measurements from older forests growing on ecologically similar sites. These results are based on the maximum potential site productivity that might be achieved under ideal conditions. However, in the field, regeneration and subsequent growth does not always occur under ideal conditions due to factors such as competition from brush or overstocking. Therefore, some forests may not reach the potential productivity suggested by research.

The results of these studies apply to forests older than 140 years, which make up about 14 per cent of the timber harvesting land base in the Dawson Creek TSA. While there are no local studies to verify the application of the results of the provincial studies to the Dawson Creek timber supply area, the results of the sensitivity analysis indicate that the long-term level could be as much as five to seven per cent higher than the base case forecast.

Figure 5. Impact to timber supply if timber harvesting land base is smaller—Dawson Creek TSA, 2002.

*Timber harvesting land base – Crown forest land within the timber supply area where timber harvesting is considered both acceptable and economically feasible.

Implications of changes in the AAC

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the Timber Supply Review. The current AAC of 1,733,033 cubic metres, if fully harvested and processed, can support about 1,230 person-years of direct forestry employment and a further 1,577 person-years of indirect and induced employment across the province. The employment income associated with this direct, indirect and induced employment would be about \$106.6 million per year. Residents of the Dawson Creek TSA account for about 53 per cent of total employment.

Increasing the harvest rate to the projected level of 2,078,000 cubic metres per year would provide additional opportunities; however, it is uncertain if demand and processing capacity would increase to use this additional volume. Current employment and income levels can be expected to continue, given the stable timber supply indicated by the timber supply analysis and assuming continued market accessibility and demand.

Your input is needed

Public input is a vital part of establishing the AAC. Feedback is welcomed on any aspect of this discussion paper, the *2002 Dawson Creek TSA Analysis Report* and other issues related to the timber supply in the Dawson Creek TSA. Forest Service staff would be pleased to answer questions to help you prepare your response. Please send your comments to the forest district manager at the address below. **Your comments will be accepted until December 9, 2002.**

You may identify yourself on the response if you wish. If you do, you are reminded that responses will be subject to the *Freedom of Information and Protection of Privacy Act* and may be made public. If the responses are made public, personal identifiers will be removed before the responses are released.

A summary of public comments will be attached to the AAC rationale and will be available from the district office when the chief forester's AAC determination is announced.

For more information contact and/or mail your comments to:

District Manager
British Columbia Forest Service
Dawson Creek Forest District
9000 17th Street
Dawson Creek, B.C. V1G 4A4

Phone: 250 784-1200

Fax: 250 784-2356

Or electronically mail to
Winn.HaysByl@gems4.gov.bc.ca

Visit our Web site at
www.for.gov.bc.ca/tsb

Background Information Regarding TSR

The Chief Forester's Responsibility

Determining the allowable annual cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. In this lengthy and complex process, the chief forester considers technical reports, analyses and public input, as well as government's social and economic objectives.

This responsibility is required by legislation in the *Forest Act*, Section 8. It states that the chief forester shall specifically consider the following factors:

1. The rate of timber production that may be sustained from the area, taking into account:

- the composition of the forest and its expected rate of growth
- the time that it will take the forest to become re-established
- silviculture treatments, including reforestation
- standards of timber utilization
- constraints on the amount of timber that may be produced due to use of the forest for other purposes.

2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.
3. The nature, production capabilities and timber requirements of established and proposed processing facilities.
4. The economic and social objectives of the Crown for the area, region and province—as expressed by the minister of forests.
5. Abnormal insect or disease infestations, and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed—others cannot. Ultimately, the chief forester's determination is an independent professional judgment based on the best available information. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from all sources.